

CLAIMS

What is claimed is:

1. An apparatus for removing surface coverings, comprising  
  
a shaft having a first end and a second end;  
  
a sleeve slidably mounted on said first end of said shaft;  
  
a bracket pivotably mounted on a first end of said sleeve;  
  
a drive mechanism for shifting a rod between a first rod position and a second rod position relative to said shaft; and  
  
a blade mounted on said bracket and extending away from said shaft;  
  
wherein said bracket is secured to said rod, such that as said rod moves between said first rod position and said second rod position, said bracket pivots on said sleeve and said sleeve slides on said shaft to shift a leading edge of said blade between a first edge position and a second edge position.
2. The apparatus of claim 1, further comprising means for limiting the sliding of said sleeve on said shaft.
3. The apparatus of claim 2, wherein said means for limiting comprises a flange formed on said shaft, such that when said rod is in said first rod position, a distal end of said sleeve engages said flange.
4. The apparatus of claim 2, wherein said means for limiting comprises a first pin mounted on said shaft proximate to said first end and a first oblong hole radially formed through said sleeve distal to said first end of said sleeve, such that said first oblong hole receives said first pin to restrict the sliding of said sleeve on said shaft to a length of said first oblong hole.
5. The apparatus of claim 4, wherein said means for limiting further comprises a second pin mounted on said shaft and a second oblong hole radially formed through said sleeve proximate to

said first end of said sleeve, such that said second oblong hole receives said second pin to restrict the sliding of said sleeve on said shaft to a length of said second oblong hole.

6. The apparatus of claim 1, wherein said sleeve extends beyond said first end of said shaft and said bracket is pivotably mounted on an end of said sleeve extending beyond said first end of said sleeve.

7. The apparatus of claim 1, wherein said drive mechanism is mounted on said shaft.

8. The apparatus of claim 1, wherein said rod is retracted into said drive mechanism in said first rod position and said rod is extended from said drive mechanism in said second rod position.

9. The apparatus of claim 1, wherein said drive mechanism is a double-acting cylinder.

10. The apparatus of claim 1, wherein said drive mechanism shifts said rod from said first rod position to said second rod position.

11. The apparatus of claim 1, wherein said drive mechanism comprises a cylinder and a piston and wherein said rod is affixed to said piston.

12. The apparatus of claim 11, wherein said drive mechanism is driven by compressed air.

13. The apparatus of claim 11, wherein said drive mechanism is hydraulically driven.

14. The apparatus of claim 1, wherein said leading edge of said blade is raised from said first edge position to said second edge position.

15. The apparatus of claim 1, further comprising a switch for activating said drive mechanism to shift said rod between said first rod position and said second rod position.

16. The apparatus of claim 15, wherein said switch is a two-position switch, such that when said switch is depressed, said rod shifts between said first rod position and said second rod position, and when said switch is released, said rod shifts between said second rod position and said first rod position.

17. The apparatus of claim 9, further comprising a first working fluid supply line for delivering a first working fluid to a first working chamber of said double-acting cylinder, a second working fluid supply line for delivering a second working fluid to a second working chamber of said double-acting cylinder, and a switch for alternating the delivery of said first working fluid to said first working chamber and said second working fluid to said second working chamber.
18. The apparatus of claim 17, wherein said shaft is hollow and wherein said first working fluid supply line and said second working fluid supply line are disposed within said shaft.
19. The apparatus of claim 18, further comprising an entry opening formed in said shaft allowing said first working fluid supply line and said second working fluid supply line to enter said shaft and an exit opening formed in said shaft allowing said first working fluid supply line and said second working fluid supply line to exit said shaft.
20. The apparatus of claim 17, wherein said first working fluid is compressed air.
21. The apparatus of claim 17, wherein said second working fluid is compressed air.
22. The apparatus of claim 17, wherein said first working fluid is the same as said second working fluid.
23. The apparatus of claim 15, wherein said switch is located proximate to said drive mechanism and wherein said shaft is hollow and at least one switch activator is disposed within said shaft to activate and deactivate said switch.
24. The apparatus of claim 23, further comprising an entry opening formed in said shaft allowing said at least one switch activator comprising a first control cable and a second control cable to enter said shaft and an exit opening formed in said shaft allowing said first control cable and said second control cable to exit said shaft.
25. The apparatus of claim 1, wherein said edge of said blade is serrated.
26. The apparatus of claim 1, further comprising a handle formed on said second end of said shaft.

27. The apparatus of claim 25, wherein said handle further comprises a switch for activating said drive mechanism to shift said rod between said first rod position and said second rod position.

28. The apparatus of claim 26, wherein said switch is a two-position switch, such that when said switch is depressed, said rod shifts between said first rod position and said second rod position, and when said switch is released, said rod shifts between said second rod position and said first rod position.

29. The apparatus of claim 25, wherein said handle is substantially perpendicular to said shaft.

30. The apparatus of claim 25, further comprising an auxiliary handle positioned above said handle.

31. The apparatus of claim 30, wherein a first arm portion of said auxiliary handle extends at an acute angle from said shaft toward said handle, a second arm portion extends from said first arm portion substantially perpendicular to said shaft, and a third arm portion extends substantially perpendicular to said second arm portion and toward said shaft.

32. The apparatus of claim 1, further comprising a shield extending from said sleeve toward a trailing edge of said blade.

33. The apparatus of claim 1, wherein said bracket further comprises means for traversing the building surface.

34. The apparatus of claim 33, wherein said means for traversing is a roller mounted substantially perpendicular to said shaft.

35. An apparatus for removing surface coverings, comprising

a shaft having a first end and a second end and having a pin mounted on said shaft proximate to said first end;

a sleeve, having an oblong hole radially formed therethrough, extending beyond and slidably mounted on said first end of said shaft, such that said oblong hole receives said pin to restrict the sliding of said sleeve on said shaft to a length of said oblong hole;

a bracket pivotably mounted on an end of said sleeve extending beyond said first end of said shaft;

a drive mechanism mounted on said shaft for shifting a rod between a retracted rod position and an extended rod position; and

a blade mounted on said bracket and extending away from said shaft;

wherein said bracket is secured to said rod, such that as said rod moves between said retracted rod position and said extended rod position, said bracket pivots on said sleeve and said sleeve slides on said shaft to shift a leading edge of said blade from a lowered edge position and a raised edge position.

36. The apparatus of claim 35, wherein said drive mechanism is a double-acting cylinder.

37. The apparatus of claim 35, wherein said drive mechanism shifts said rod from said retracted rod position to said extended rod position.

38. The apparatus of claim 35, wherein said drive mechanism comprises a cylinder and a piston and wherein said rod is affixed to said piston.

39. The apparatus of claim 38, wherein said drive mechanism is driven by compressed air.

40. The apparatus of claim 38, wherein said drive mechanism is hydraulically driven.

41. The apparatus of claim 35, further comprising a switch for activating said drive mechanism to shift said rod between said retracted rod position and said extended rod position.

42. The apparatus of claim 41, wherein said switch is a two-position switch, such that when said switch is depressed, said rod shifts between said retracted rod position and said extended rod position, and when said switch is released, said rod shifts between said extended rod position and said retracted rod position.

43. The apparatus of claim 36, further comprising a first working fluid supply line for delivering a first working fluid to a first working chamber of said double-acting cylinder, a second working fluid supply line for delivering a second working fluid to a second working chamber of said double-acting cylinder, and a switch for alternating the delivery of said first working fluid to said first working chamber and said second working fluid to said second working chamber.

44. The apparatus of claim 43, wherein said shaft is hollow and said first working fluid supply line and said second working fluid supply line are disposed within said shaft.

45. The apparatus of claim 44, further comprising an entry opening formed in said shaft allowing said first working fluid supply line and said second working fluid supply line to enter said shaft and an exit opening formed in said shaft allowing said first working fluid supply line and said second working fluid supply line to exit said shaft.

46. The apparatus of claim 43, wherein said first working fluid is compressed air.

47. The apparatus of claim 43, wherein said second working fluid is compressed air.

48. The apparatus of claim 43, wherein said first working fluid is the same as said second working fluid.

49. The apparatus of claim 39, wherein said switch is located proximate to said drive mechanism and wherein said shaft is hollow and at least one switch activator is disposed within said shaft to activate and deactivate said switch.

50. The apparatus of claim 49, further comprising an entry opening formed in said shaft allowing said at least one switch activator comprising a first control cable and a second control cable to enter said shaft and an exit opening formed in said shaft allowing said first control cable and said second control cable to exit said shaft.

51. The apparatus of claim 35, wherein said edge of said blade is serrated.

52. The apparatus of claim 35, further comprising a handle formed on said second end of said shaft.

53. The apparatus of claim 52, wherein said handle further comprises a switch for activating said drive mechanism to shift said rod between said first rod position and said second rod position.

54. The apparatus of claim 52, wherein said handle is substantially perpendicular to said shaft.

55. The apparatus of claim 52, further comprising an auxiliary handle positioned above said handle.

56. The apparatus of claim 55, wherein a first arm portion of said auxiliary handle extends at an acute angle from said shaft toward said handle, a second arm portion extends from said first arm portion substantially perpendicular to said shaft, and a third arm portion extends substantially perpendicular to said second arm portion and toward said shaft.

57. The apparatus of claim 35, further comprising a shield extending from said sleeve toward a trailing edge of said blade.

58. A method for removing surface coverings from a building using said apparatus of claim 28, comprising the steps of:

sliding said blade of said apparatus along a building surface and forcing said blade underneath said surface covering;

triggering said switch for activating said drive mechanism to shift said rod between said first rod position and said second rod position;

maintaining said apparatus against said building surface; and

releasing said switch, so that said drive mechanism shifts said rod between said second rod position and said first rod position.

59. The method of claim 58, further comprising the step of adjusting an operating angle between said building surface and said shaft.